

KLF7 (B-8): sc-398576

BACKGROUND

KLF7 (Krüppel-like factor 7) is a transcriptional activator that belongs to the Krüppel C₂H₂-type zinc finger protein family. KLF7 targets promotor regions bearing CACCC elements in order to regulate transcription. It is believed that KLF7 is an important element for regulation of differentiation and the development of nervous systems. Specifically, increased expression of KLF7 is associated with neuronal precursors exiting the cell cycle and beginning to differentiate. Overexpression of KLF7 can lead to cell cycle arrest and a decrease in DNA synthesis. Also, KLF7 is thought to regulate the expression of Trk A, the receptor for nerve growth factor, which is required for the normal growth and maturation of neurons. KLF7 is a widely expressed protein with highest expression found in brain and nervous tissue.

CHROMOSOMAL LOCATION

Genetic locus: KLF7 (human) mapping to 2q33.3; Klf7 (mouse) mapping to 1 C2.

SOURCE

KLF7 (B-8) is a mouse monoclonal antibody raised against amino acids 141-183 mapping within an internal region of KLF7 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KLF7 (B-8) is available conjugated to agarose (sc-398576 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398576 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398576 PE), fluorescein (sc-398576 FITC), Alexa Fluor® 488 (sc-398576 AF488), Alexa Fluor® 546 (sc-398576 AF546), Alexa Fluor® 594 (sc-398576 AF594) or Alexa Fluor® 647 (sc-398576 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398576 AF680) or Alexa Fluor® 790 (sc-398576 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

KLF7 (B-8) is recommended for detection of KLF7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KLF7 siRNA (h): sc-106721, KLF7 siRNA (m): sc-146499, KLF7 shRNA Plasmid (h): sc-106721-SH, KLF7 shRNA Plasmid (m): sc-146499-SH, KLF7 shRNA (h) Lentiviral Particles: sc-106721-V and KLF7 shRNA (m) Lentiviral Particles: sc-146499-V.

Molecular Weight of KLF7: 38 kDa.

Positive Controls: BC₃H1 cell lysate: sc-2299, K-562 nuclear extract: sc-2130 or human brain extract: sc-364375.

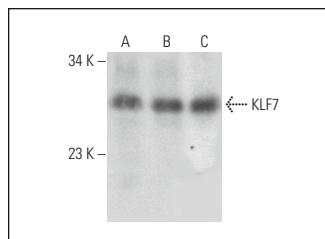
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

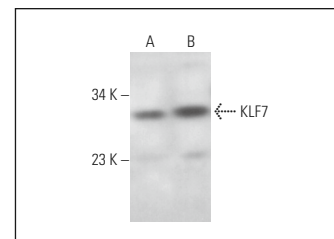
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



KLF7 (B-8): sc-398576. Western blot analysis of KLF7 expression in SK-N-MC (A) and K-562 (B) nuclear extracts and human brain tissue extract (C).



KLF7 (B-8): sc-398576. Western blot analysis of KLF7 expression in BC₃H1 (A) and c4 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Yang, J., et al. 2020. Elevated KLF7 levels may serve as a prognosis signature and might contribute to progression of squamous carcinoma. *FEBS Open Bio* 10: 1577-1586.
- Guo, Y., et al. 2021. KLF7/VPS35 axis contributes to hepatocellular carcinoma progression through CCDC85C-activated β -catenin pathway. *Cell Biosci.* 11: 73.
- Wang, J., et al. 2021. GNA14 stimulation of KLF7 promotes malignant growth of endometrial cancer through upregulation of HAS2. *BMC Cancer* 21: 456.
- Hu, X., et al. 2022. MiR-4733-5p promotes gallbladder carcinoma progression via directly targeting Krüppel like factor 7. *Bioengineered* 13: 10691-10706.
- Cao, J., et al. 2022. Inhibition of Krüppel-like factor 7 attenuates cell proliferation and inflammation of fibroblast-like synoviocytes in rheumatoid arthritis through nuclear factor κ B and mitogen-activated protein kinase signaling pathway. *Exp. Anim.* 71: 356-367.
- Müller, F., et al. 2022. CBP/p300 activation promotes axon growth, sprouting, and synaptic plasticity in chronic experimental spinal cord injury with severe disability. *PLoS Biol.* 20: e3001310.
- Cai, H., et al. 2024. KLF7 regulates super-enhancer-driven IGF2BP2 overexpression to promote the progression of head and neck squamous cell carcinoma. *J. Exp. Clin. Cancer Res.* 43: 69.
- Li, Y. and Liu, L. 2024. UKLF/PCBP2 axis governs the colorectal cancer development by transcriptionally activating SLC39A4. *Biochim. Biophys. Acta Mol. Cell Res.* 1871: 119755.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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